

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/071,510 A
Source: IFW16
Date Processed by STIC: 10/26/84

ENTERED



IFW16

RAW SEQUENCE LISTING

DATE: 11/02/2004

PATENT APPLICATION: US/10/071,510A

TIME: 10:18:38

Input Set : A:\Seqlist.txt

Output Set: N:\CRF4\11012004\J071510A.raw

```

3 <110> APPLICANT: Clark, Edwin
4   Grenfell-Lee, Tallessyn
5   Lu, Karen
6   Hartmann, Lynn
7   Brown, Jeffrey L.
9 <120> TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR THE
10  IDENTIFICATION, ASSESSMENT, PREVENTION AND THERAPY
11  OF HUMAN CANCERS
13 <130> FILE REFERENCE: MRI-027
W--> 14 <140> CURRENT APPLICATION NUMBER: 10/071,510A
15 <141> CURRENT FILING DATE: 2002-02-08
17 <150> PRIOR APPLICATION NUMBER: US 60/267,276
18 <151> PRIOR FILING DATE: 2001-02-08
20 <160> NUMBER OF SEQ ID NOS: 19
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 242
26 <212> TYPE: DNA
27 <213> ORGANISM: Homo sapiens
29 <220> FEATURE:
30 <221> NAME/KEY: misc_feature
31 <222> LOCATION: 57, 62, 71, 78, 117, 133, 137, 207, 219, 226, 229
32 <223> OTHER INFORMATION: n = A,T,C or G
34 <400> SEQUENCE: 1
W--> 35 aggtacaagc tttttttttt tttttttttt tttttttttt tcctactgga atcgttnaat 60
W--> 36 gngtctactt nttccacnca taattataaa agaataagaa tcgacaaaaa tattttnttt 120
W--> 37 ccataatatg tanaggnggt tggtttcttt tttttttttt ttcttttctt ttaacttttt 180
W--> 38 tttttttttt tttttttttt gggctcnaaa gggggtagn ggggtncntt aggacctgcc 240
39 cg 242
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 417
43 <212> TYPE: DNA
44 <213> ORGANISM: Homo sapiens
46 <220> FEATURE:
47 <221> NAME/KEY: misc_feature
48 <222> LOCATION: 338, 349, 388
49 <223> OTHER INFORMATION: n = A,T,C or G
51 <400> SEQUENCE: 2
52 tttatgagaa agcagctatt aaaggtagag tgattcaagt ctataaggca atttatattc 60
53 tatatttagt ttttcattct gaatagactg aaaaaatata tgaattagaa atttatattc 120
54 gaccatcttt cttttgttgc ttttttttaa catttacttt tctttaagcc ataaggatgc 180
55 ataaattata cagggcatga ccttatgagt aacatcaaca ggtatttcag aaataacaga 240
56 acacgtctag aaatgtatgg tggtaatatt aatctatata ttttttgcca tgatttgtac 300

```

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```

W--> 57 attgacattg tatgaaatga gcacactgag ggttttttngg tggtagctgnc gcatccaagg 360
W--> 58 aggttggggga gaactatata agaattgtntt ataataccta ttttaaataa agtaaaa 417
60 <210> SEQ ID NO: 3
61 <211> LENGTH: 512
62 <212> TYPE: DNA
63 <213> ORGANISM: Homo sapiens
65 <400> SEQUENCE: 3
66 cgtgactgag gacagtgaag agagcccacc tggtagtagag tgctcatttt agctgccaaag 60
67 aaaagcctaa tttatttttca gggcaaaaact tctgactgag gacaaatgac ttcattataa 120
68 tccaaaagca gcatcaggaa aagaagctga actgtgcgaa tagaaatgaa tggggctgct 180
69 gctgctgctg ctgcttttctt tttaatcagt agaaatggaa ttctgcctgc caaacagaag 240
70 tctaggagga acctgcagac ggcccctgta ctgaaggcat tttgtcaggg cttaaagcaa 300
71 ctttcaagat catgacactc tgctatgagg accgaaagaa cttggagata aatatacatg 360
72 tactatgtgg tgggaccgat tttgaatctg aactaaatta aatgatggaa aacgaccttg 420
73 ggtgagtcca ttcattggctg aacttgctgg gaatgatata acttttcaaa ataatttggt 480
74 tccttcaaat gacaccaaca cctatagtta ag 512
76 <210> SEQ ID NO: 4
77 <211> LENGTH: 356
78 <212> TYPE: DNA
79 <213> ORGANISM: Homo sapiens
81 <220> FEATURE:
82 <221> NAME/KEY: misc_feature
83 <222> LOCATION: 1, 17, 24, 39, 95, 98, 113, 116, 130, 143, 153, 154, 155,
84 164, 165, 172, 174, 190, 192, 198, 202, 206, 207, 238, 245,
85 246, 247, 253, 285, 295, 299, 300, 302, 338
86 <223> OTHER INFORMATION: n = A,T,C or G
88 <400> SEQUENCE: 4
W--> 89 ncggttgaac tacgganaac aacncgctgc cttcacagna cctagagtct cttttggagc 60
W--> 90 taccaacctc gccgaaggta cggcgacaca gacgngangt gtacaagctt ttntanatgg 120
W--> 91 tggatattcn acaattaaat tcntacgtac tcnnngtcca gtcnngagtc cnantgagct 180
W--> 92 gtttgctaan tnatgaantt cnttcnngca cgtgaagggc aaagagaaat aagggccnac 240
W--> 93 ttccnnaag ggnntcctcg cgcatttagg tatcaggctt acttnagtat gtatngccnn 300
W--> 94 cntccgagcg ggagagccaa gggtagctga taaaattnaa aggaataaca taaaaa 356
96 <210> SEQ ID NO: 5
97 <211> LENGTH: 577
98 <212> TYPE: DNA
99 <213> ORGANISM: Homo sapiens
101 <220> FEATURE:
102 <221> NAME/KEY: misc_feature
103 <222> LOCATION: 53, 58, 59, 143, 173, 197, 242, 303, 432, 491, 504, 514, 537
104 <223> OTHER INFORMATION: n = A,T,C or G
106 <400> SEQUENCE: 5
W--> 107 gtcgaccccg cgtccgctta ggggaactgca atattataag tatagtaatg acngcagnng 60
108 agaaccataa tgatggcctc cccggcaaaag aagaaccaac ccgtgttacg cctgaggttg 120
W--> 109 caattttttg aatttttgca gtnagacctt ggcgatgacc ttgagcagta ggngataaat 180
W--> 110 tccacatgct tagcgtacca gtaattggaac actaggcata aatgggttat taaagtatcc 240
W--> 111 anaattaaca tgcttagctg tgacattgga aaggcaatgt gtttgctgtg gcacacatac 300
W--> 112 tantaaataa tgactggctc gaatttggtt ttcgtttgtc tattaaagtc aatttactaa 360
113 ggcagggagg gccagagct gtgctgtcca gttcaatagc catgcgtgac tgctaaggac 420

```

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```

W--> 114 ttccaaagtg gntagtccaa tgtcaggat gctgcaagt tcaaacacac actggatttc 480
W--> 115 aaagactaaa nccaaaaaaa tgtnaatca tctnaatatt ttgggtatatac tcgggttnaag 540
116 aaaataaaat tattttttgcc ttttatgttt ttaaaaag 577
118 <210> SEQ ID NO: 6
119 <211> LENGTH: 331
120 <212> TYPE: DNA
121 <213> ORGANISM: Homo sapiens
123 <220> FEATURE:
124 <221> NAME/KEY: misc_feature
125 <222> LOCATION: 3
126 <223> OTHER INFORMATION: n = A,T,C or G
128 <400> SEQUENCE: 6
W--> 129 ggnccaccaca ctctacaaaag gcagtcact acatgacaca ttccgcttct gcctgggtcac 60
130 caacttgacg atggactccg tgttggtcac tgtcaaggca ttgttctcct ccaatttggga 120
131 cccagcctg gtggagcaag tctttctaga taagaccctg aatgcctcat tccattgggt 180
132 gggctccacc taccagttgg tggacatcca tgtgacagaa atggagtcac cagtttatca 240
133 accaacaagc agctccagca cccagcactt ctacctgaat ttcaccatca ccaacctacc 300
134 atattccag gacaaagccc agccaggcac c 331
136 <210> SEQ ID NO: 7
137 <211> LENGTH: 446
138 <212> TYPE: DNA
139 <213> ORGANISM: Homo sapiens
141 <400> SEQUENCE: 7
142 ccctcgcggt ggcgggagag gtgcatcacc ctgctgaggg acatccagga caaggtcacc 60
143 acactctaca aaggcagtca actacatgac acattccgct tctgcctggg caccaacttg 120
144 acgatggact ccgtgttggg cactgtcaag gcattgttct cctccaattt ggacccagc 180
145 ctggtggagc aagtctttct agataagacc ctgaatgcct cattccattg gctggggtcc 240
146 acctaccagt tgggtggacat ccatgtgaca gaaatggagt catcagttta tcaaccaaca 300
147 agcagctcca gcacccagca cttctacctg aatttcacca tcaccaacct accatatcc 360
148 caggacaaag cccagccagg caccaccaat taccagagga acaaaaggaa tattgaggat 420
149 gcgctcaacc aactcttcga aacagc 446
151 <210> SEQ ID NO: 8
152 <211> LENGTH: 497
153 <212> TYPE: DNA
154 <213> ORGANISM: Homo sapiens
156 <220> FEATURE:
157 <221> NAME/KEY: misc_feature
158 <222> LOCATION: 497
159 <223> OTHER INFORMATION: n = A,T,C or G
161 <400> SEQUENCE: 8
162 tacttagggc gaattggagc tccccgcggt ggcggccgag gtacgcggga gataagacc 60
163 tgaatgctc attccattgg ctgggtcca cctaccagtt ggtggacatc catgtgacag 120
164 aaatggagtc atcagtttat caaccaaca gcagctccag caccagcac ttctacctga 180
165 atttcacat caccaaccta ccatattccc gggacaaagc ccagccaggc accaccaatt 240
166 accagaggaa caaaaggaat attgaggat cgctcaacca actcttccga aacagcagca 300
167 tcaagagtta ttttctgac tgtcaagttt caacattcag gtctgtcccc aacaggcacc 360
168 acaccggggt ggactccctg tgtaacttct cgccactggc tcggagagta gacagagttg 420
169 ccatctatga ggaatttctg cggtatgacc ggaatgggta cctgcccggg ccggccgctt 480
W--> 170 cggctttaga actagtn 497

```

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Input Set : A:\Seqlist.txt

Output Set : N:\CRF4\11012004\J071510A.raw

172 <210> SEQ ID NO: 9

173 <211> LENGTH: 488

174 <212> TYPE: DNA

175 <213> ORGANISM: Homo sapiens

177 <220> FEATURE:

178 <221> NAME/KEY: misc_feature

179 <222> LOCATION: 27

180 <223> OTHER INFORMATION: n = A,T,C or G

182 <400> SEQUENCE: 9

```

W--> 183 atagggcgaa ttggagctcc ccgcggnngc ggccgaggta ccattccggg tcatccgcag 60
184 aaattcctca tagatggcaa ctctgtctac tctccgagcc agtggcgaga agttacacag 120
185 ggagtcacc ccggtgtggt gcctgttggg gacagacctg aatgttgaaa cttgacagtc 180
186 agaaaaataa ctcttgatgc tgctgtttcg gaagagttgg ttgagcgcat cctcaatatt 240
187 ccttttgttc ctctggtaat tgggtgtgcc tggctgggct ttgtcctggg aatatggtag 300
188 gttggtgatg gtgaaattca ggtagaagtg ctgggtgctg gagctgcttg ttggttgata 360
189 aactgatgac tccatttctg tcacatggat gtccaccaac tggtaggtgg agcccagcca 420
190 atgggaatga ggcattcagg gtcttatcta gaaagacttg ctccaccagg ctgggggtcca 480
191 aattggag                                     488

```

193 <210> SEQ ID NO: 10

194 <211> LENGTH: 463

195 <212> TYPE: DNA

196 <213> ORGANISM: Homo sapiens

198 <400> SEQUENCE: 10

```

199 ccgcggtggc ggccgcccgg gcaggtacat caccctgctg agggacatcc aggacaaggt 60
200 caccacactc tacaaaggca gtcaactaca tgacacattc cgcttctgcc tggtcaccaa 120
201 cttgacgatg gactccgtgt cggtcactgt caaggcattg ttctcctcca atttggacce 180
202 cagcctgggtg gagcaagtct ttctagataa gaccctgaat gcctcattcc attggctggg 240
203 ctccacctac cagttgggtg acatccatgt ggcagaaatg gagtcacag tttatcaacc 300
204 aacaagcagc tccagcacc agcacttcta cctgaatttc accatcacca acctaccata 360
205 ttcccaggag aaagcccagc caggcaccac caattaccag aggaacaaaa ggaatattga 420
206 ggatgcgctc aaccaactct tccgaaacag cagcatcaag agt                                     463

```

208 <210> SEQ ID NO: 11

209 <211> LENGTH: 302

210 <212> TYPE: DNA

211 <213> ORGANISM: Homo sapiens

213 <220> FEATURE:

214 <221> NAME/KEY: misc_feature

215 <222> LOCATION: 6, 52, 53

216 <223> OTHER INFORMATION: n = A,T,C or G

218 <400> SEQUENCE: 11

```

W--> 219 accgcngtgg cggcgcccg ggcaggtaca tcaccctgct gagggacttt tnnggacaag 60
220 gtcaccacac tctacaaagg cagtcaacta catgacacat tccgcttctg cctgggtcac 120
221 aacttgacga tggactccgt gttgggtcact gtcaaggcat tgttctcctc caatttggac 180
222 cccagcctgg tggagcaagt ctttctagat aagaccctga atgcctcatt ccattggctg 240
223 ggctccacct accagttggt ggacatccat gtgacagaaa tggagtcac agttttatca 300
224 ac                                     302

```

226 <210> SEQ ID NO: 12

227 <211> LENGTH: 534

228 <212> TYPE: DNA

RAW SEQUENCE LISTING

DATE: 11/02/2004

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TIME: 10:18:38

Input Set : A:\Seqlist.txt

Output Set: N:\CRF4\11012004\J071510A.raw

229 <213> ORGANISM: Homo sapiens

231 <220> FEATURE:

232 <221> NAME/KEY: misc_feature

233 <222> LOCATION: 18, 463, 474, 518

234 <223> OTHER INFORMATION: n = A,T,C or G

236 <400> SEQUENCE: 12

```

W--> 237 agggcggaatt ggagctcncc gcggtggcgg ccgaggtacc acctgaaggc cctcacactc 60
      238 aacttcacca tctccaatct ccagtattca ccagatatgg gcaagggctc agctacattc 120
      239 aactccaccg aggggggtcct tcagcacctg ctcagaccct tgttccagaa gagcagcatg 180
      240 ggcccccttct acttgggttg ccaactgatc tccctcaggc ctgagaagga tggggcagcc 240
      241 actggtgtgg acaccacctg cacctaccac cctgaccctg tgggcccccg gctggacata 300
      242 cagcagcttt actgggagct gagtcactg acccatgggt gtcacccaac tgggcttcta 360
      243 ttgtcctgga cagggatagc ctcttcatca atggctatgc accccaaaat ttatcaatcc 420
W--> 244 gggggcgagg tacctgcccc gggcgggcgg cttaaaacta ggnnggatcc ccnnggcttg 480
W--> 245 caggaatttc gatattcaag cttatcgata cccgtccnac cttcgagggg gggg      534

```

247 <210> SEQ ID NO: 13

248 <211> LENGTH: 290

249 <212> TYPE: DNA

250 <213> ORGANISM: Homo sapiens

252 <220> FEATURE:

253 <221> NAME/KEY: misc_feature

254 <222> LOCATION: 15, 16, 39, 41, 71, 106, 129, 137, 140, 149, 164, 167, 226,

255 245, 251, 263, 268

256 <223> OTHER INFORMATION: n = A,T,C or G

258 <400> SEQUENCE: 13

```

W--> 259 tgggggaaag ggagnnccca acgatacttg aactttaant ntggaaagag tgagattcag 60
W--> 260 aaatcgccac nactggactt taagggacgt cctgtgtcag cacaanggac tggcacacac 120
W--> 261 agacacacna gaccgangan aaactgcana caaatggaga tacnaanact tagaaggaca 180
W--> 262 gtccttttca cctcactcta cttgtccaga aggtaaaaag acacanccag aaagaaaagg 240
W--> 263 catcngctca nctctcagat cangacangc tgtggatctg tggcgggtact      290

```

265 <210> SEQ ID NO: 14

266 <211> LENGTH: 430

267 <212> TYPE: DNA

268 <213> ORGANISM: Homo sapiens

270 <220> FEATURE:

271 <221> NAME/KEY: misc_feature

272 <222> LOCATION: 93, 315, 407

273 <223> OTHER INFORMATION: n = A,T,C or G

275 <400> SEQUENCE: 14

```

      276 gcgtccgaat ttcctgggta ccccgatatat aagaaaatgt taaagtcagg caggaaaact 60
W--> 277 atagaattaa agccttatag tatattatat agnaaagccc tatatagtat agacagaaaa 120
      278 gtttagggaa ggcccacaat tgcaaagaaa agtgggtggtc acggaacaag ggaatgtcat 180
      279 acaaatgtgg acacacactg cgttactgag cgccacgtct catagggtgag aagcataact 240
      280 ctagaagggtg agaaatgaga attttcactt ccactcttcc atttgttgtg tgactctgcc 300
W--> 281 atttactttc cttntttttg tattttcatt ttccttttaa aaatggaaat atgaattttg 360
W--> 282 aattttctgt ctatctcaca ggttttttgt ggggatgcat ttaaaangtt taattagtaa 420
      283 ataatggtat      430
      285 <210> SEQ ID NO: 15
      286 <211> LENGTH: 435

```

RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 57,62,71,78,117,133,137,207,219,226,229
Seq#:2; N Pos. 338,349,388
Seq#:4; N Pos. 1,17,24,39,95,98,113,116,130,143,153,154,155,164,165,172,174
Seq#:4; N Pos. 190,192,198,202,206,207,238,245,246,247,253,285,295,299,300
Seq#:4; N Pos. 302,338
Seq#:5; N Pos. 53,58,59,143,173,197,242,303,432,491,504,514,537
Seq#:6; N Pos. 3
Seq#:8; N Pos. 497
Seq#:9; N Pos. 27
Seq#:11; N Pos. 6,52,53
Seq#:12; N Pos. 18,463,474,518
Seq#:13; N Pos. 15,16,39,41,71,106,129,137,140,149,164,167,226,245,251,263
Seq#:13; N Pos. 268
Seq#:14; N Pos. 93,315,407
Seq#:15; N Pos. 39,242,363,393,404,406,412

VERIFICATION SUMMARY

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Input Set : A:\Seqlist.txt

Output Set: N:\CRF4\11012004\J071510A.raw

L:14 M:283 W: Missing Blank Line separator, <140> field identifier
L:35 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:36 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:60
L:37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120
L:38 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:180
L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:300
L:58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:360
L:89 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:60
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:120
L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:180
L:93 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:240
L:94 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:300
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:120
L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:180
L:111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:240
L:112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:300
L:114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:420
L:115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:480
L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480
L:183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:244 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:420
L:245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:480
L:259 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:60
L:261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:120
L:262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:180
L:263 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:240
L:277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:60
L:281 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:300
L:282 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:360
L:296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:300 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:240
L:302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:360